

REMARKS

Claims 1-5, 7 and 8 have been amended and claim 6 has been canceled. Applicants reserve the right to pursue the original claims and other claims in this and other applications.

Claims 1-8 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Reconsideration is respectfully requested.

Claim 1 has been amended to recite that the “multiple valve has means for switching said channels.” Accordingly, as amended, claim 1 requires that the switching of the channels is performed by the multiple valve means. Further, Applicants have amended claim 1 to recite a “multiple valve” instead of a “switching valve” as suggested by the Office Action. Support for the chamber and the multiple valve can be found at least at Figure 1 (204; 205) and paragraphs [0049], [0060] and [0061].

With respect to claim 2, the “chambers” and “disposed on channels” language objected to by the Office Action have been removed. Applicants note that the “chambers” have been included in claim 1 and that claim 1 now recites that the chambers are “disposed in each of said plurality of channels” (emphasis added).

Claim 3 has been amended to recite “a channel switching valve disposed in each of said plurality of channels between each of said liquid suction portions and each of said chambers.” Applicants respectfully submit that claim 3, as amended, makes clear that the channels referenced are those located between corresponding pairs of the liquid suction portions and the chambers and that the channel switching valve may control the communication of each of the corresponding liquid suction portions and chambers. Applicants also remind the Examiner that the Applicants are entitled to claim their invention broadly. Accordingly, Applicants are not required to specifically claim a single valve controlling the communication between all of the liquid suction portions and all of the chambers as opposed to individual valves controlling communication between a single liquid suction portion and a single chamber, or any combination of the two.

Claims 4 and 5 have been amended to include “a plurality of nucleic acid capturing containers ... having a carrier capable of capturing nucleic acid.” Accordingly, claims 4 and 5 further limit the structure of the apparatus for sucking liquid without merely reciting an intended use of the apparatus for sucking liquid.

Claim 6 has been canceled to further prosecution of the application.

Applicants respectfully submit that claim 7, as amended, provides further structural limitations by requiring the capacity of the chambers to be at least ten times greater in volume than the volume of the liquid to be sucked. This requirement provides a size requirement for the chambers and, accordingly, limits the structure of the chambers to being of at least a certain size in relation to the liquid to be sucked.

Claim 8 has been amended to more clearly define the “channels.” As recited by claim 8, the channels may be divided into a first part that connects the multiple valve to the chambers and a second part that connects the chambers to the liquid suction portions. Claim 8 relates the internal diameter of the first portion of the channels to the second portion of the channels.

Accordingly, the rejection should be withdrawn.

Claims 1-8 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Brink (U.S. Patent Pub. No. 2002/0164821). Reconsideration is respectfully requested.

Claim 1 recites an apparatus for sucking liquid comprising “a plurality of liquid suction portions; a pump mechanism capable of sucking a fluid; a multiple valve connected to said liquid suction portions via a plurality of channels and to said pump mechanism via a single channel; and a chamber disposed in each of said plurality of channels wherein said multiple valve has means for switching said plurality of channels in order to communicate a specific number of said liquid suction portions with said pump mechanism during liquid suction.”

Brink refers to a liquid dispensing device with three containers 1, 2, 3 connected by three supply conduits 51, 52, 53 to a selection valve 30. (Brink, FIG. 1; ¶ [0023]). The selection valve 30 is connected to one side of a settling vessel 25 containing a liquid 11. (Brink, FIG. 1; ¶ [0023]). The other side of the settling vessel 25 is connected to a pump 20 comprising a piston 21 and a cylinder 22. Brink fails to disclose or suggest “a chamber disposed in each of said plurality of channels” wherein the plurality of channels connect a multiple valve to the liquid suction portions of the device. The chamber of claim 1 is of particular importance for the suction of liquids of a high viscosity such as blood samples. Unlike the chamber of claim 1, Brink merely discloses three supply conduits 51, 52, 53 connecting the containers 1, 2, 3 to the selection valve 30. Therefore, claim 1 is allowable over Brink.

Dependent claims 2-8 are allowable along with claim 1 and for other reasons. The rejection should be withdrawn and the claims allowed.

Claims 1-8 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Marshall (U.S. Patent No. 6,887,429). Reconsideration is respectfully requested.

Marshall refers to an apparatus and method for automated medical diagnostic tests. The apparatus of Marshall includes a multi-position valve 8 that is connected to a disposable reagent cartridge 30 by a reagent stream line 17 and that is also connected to a sample source 13b by a sample stream line 13a. (Marshall, FIG. 1; Col. 5, Lns. 1-20). The apparatus of Marshall also includes a syringe pump 10 and detector 16 that are each connected to the multi-position valve 8 by connectors each having reaction coils 12, 14. (Marshall, FIG. 1; Col. 5, Lns. 21-32). However, Marshall fails to disclose or suggest “a chamber disposed in each of said plurality of channels” wherein the plurality of channels connect a multiple valve to the liquid suction portions of the device. Unlike the chamber of claim 1, Marshall teaches that the sample source 13b and disposable reagent cartridge 30 are directly connected to the multi-valve 8 with no chamber between the two. Therefore, claim 1 is allowable over Marshall.

Dependent claims 2-8 are allowable along with claim 1 and for other reasons. The rejection should be withdrawn and the claims allowed.

Claims 1-8 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Afeyan (U.S. Patent No. 6,344,172). Reconsideration is respectfully requested.

Afeyan refers to a protein chromatography system including a sample input valve 151 connected to a mixing valve 112. (Afeyan, FIG. 3; Col. 8, Ln. 55 – Col. 9, Ln. 6). The mixing valve 112 is connected to solvent reservoirs 111a-111f. *Id.* The sample input valve 151 connects two adjacent ports of the valve to each other and may be manipulated to control which two adjacent ports are connected. (Afeyan, Col. 9, Lns. 43-67). However, Afeyan fails to disclose or suggest “a chamber disposed in each of said plurality of channels” wherein the plurality of channels connect a multiple valve to the liquid suction portions of the device. Unlike the chamber of claim 1, Afeyan teaches that the solvent reservoirs 111a-111f are passed through a mixing valve 112 and then directly sent to the sample input valve 151. Afeyan does not teach a chamber positioned between a multiple valve and the solvent reservoirs 111a-111f. Therefore, claim 1 is allowable over Afeyan.

Dependent claims 2-8 are allowable along with claim 1 and for other reasons. Accordingly, the rejection should be withdrawn and the claims allowed.

Claims 1-8 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Kioke (U.S. Patent No. 5,660,792). Reconsideration is respectfully requested.

Kioke refers to an automatic solid phase extraction device with an interchangeable nozzle holder head. The apparatus of Kioke includes a plurality of solvent bottles M1-M6 from which liquid is sucked and passed through a selection valve 26. (Kioke, FIG. 6). The apparatus of Kioke further includes a pump 28A-28C. *Id.* However, Kioke fails to disclose or suggest “a chamber disposed in each of said plurality of channels” wherein the plurality of channels connect a multiple valve to the liquid suction portions of the device. Unlike the chamber of claim 1, Kioke teaches that the solvent bottles M1-M6 are directly connected to the selection valve 26. Therefore, claim 1 is allowable over Kioke.

Dependent claims 2-8 are allowable along with claim 1 and for other reasons. Accordingly, the rejection should be withdrawn and the claims allowed.

Allowance of the application is solicited.

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